

REMARKS

Summary of the Office Action and Formalities

Status of Claims

Claims 1-13 are all the claims pending in the application.

Additional Fees

Submitted herewith is a Petition for Extension of Time with fee.

Drawings

Applicant thanks the Examiner for accepting figures 1 and 2 submitted on March 22, 2006 and figure 3 submitted on September 22, 2008.

Examiner Interview

Applicant thanks the Examiner and the Supervisory Examiner for the interview conducted on February 25, 2009. Applicant is submitting herewith a Statement of Substance of Interview.

Art Rejections

1. Claims 1-4, 6, 7 and 13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gyorgy (US 5,662,064) in view of Piltz (US 4,913,306).
2. Claim 5 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gyorgy modified by Piltz and further in view of Larkin (US 5,860,743).
3. Claims 8, 11, and 12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gyorgy modified by Piltz and further in view of LeBlanc et al. (US 4,970,983).
4. Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gyorgy modified by Piltz and further in view of Belli (US 5,600,080).

Claim Rejections 35 U.S.C. § 103(a)

In rejecting claims 1-4, 6, 7 and 13 over Gyorgy in view of Piltz, the grounds of rejection state:

Regarding claim 1, Gyorgy discloses a horn 10 shown in Fig. 1 to have a blow tube or pressure tube 14 where air is blown into a pressure chamber or clearance 21 (column 3 lines 20-21). This figure further shows an acoustic chamber partially formed by sound tube 11 coaxial with said pressure chamber 21, formed by tube 14 (column 3 lines 2-4). Gyorgy further discloses a strip or membrane 22, further shown in Fig. 1 to be coaxial with said acoustic chamber and fixed at its periphery to a free end of the partition of tube 14, enclosing said pressure chamber 21. This reference further discloses said strip 22 to be commonly made of metal in the prior art (column 1 lines 24-26), but describes the use of a strip 22 made out of plastic or polyethylene (column 3 lines 15-16). Gyorgy fails to explicitly disclose that the vibrating metal strip is made of a plastic coated aluminum.

However Piltz teaches an end closure being a flexible strip or membrane being made of plastic coated aluminum (column 3 lines 40-43).

Given the teachings of Piltz, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy with the vibrating metal strip to be made of plastic coated aluminum. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Doing so would provide a weather proof covering, where the sound can be adjusted through varying the thickness of the aluminum used.

(Office Action at pages 2-3.)

As explained by Applicant's representative during the interview, there would not have been any reason to modify Gyorgy to provide a plastic coated vibrating membrane for weather-proofing, nor was there any reason to combine Gyorgy with Piltz.

Regarding claim 1, Gyorgy teaches away from using "a plastic coated aluminum strip" in a horn. Gyorgy states that metal membranes were problematic because they were "somewhat

massive,” and provides no indication that there were problems with corrosion. (Gyorgy, col. 1, ll. 23-24). Further, Gyorgy discloses that vibrating members consisting of only “polyethylene, polypropylene, cellophane, paper or rubber” were preferable over the metal membranes because “relatively small pressures . . . can be used to generate very high sound amplitudes.” (Gyorgy, col. 2, ll. 3-17). Thus, the improvement in Gyorgy was to provide a compact horn with a non-metallic vibrating member for a sports fan. (See Gyorgy, Abstract). As such, there would have been no reason to combine metal with the membrane in Gyorgy since the claimed advantages of Gyorgy would appear to be lost by adding metal to the membrane.

Further, it would not have been obvious to one skilled in the art to use a plastic coated aluminum membrane to provide weather proofing. Nothing in Gyorgy, Piltz, or the current application indicates that there was a problem of corrosion or other defects due to the lack of weather proofing. In fact, Gyorgy states that the prior horns were made of stainless steel, and therefore would not require any weatherproofing at all. (Gyorgy, col. 1, lines 30-31.) Further, aluminum is generally known to be a corrosion resistant material so one skilled in the art would not weather proof an aluminum membrane with plastic.

Regarding the combination of Piltz with Gyorgy, Applicant submits that one of ordinary skill in the art would not have combined the teachings of Piltz with Gyorgy because the intended uses of the devices disclosed in these references are entirely unrelated. The membrane in Gyorgy is a flexible membrane that functions by vibrating to produce sound when pressurized air passes between a pressure chamber and a sound chamber. (See Gyorgy, col. 2, ll. 24-53). In contrast, Piltz discloses that the “inner membrane [comprising] plastics coated aluminum foil” is a secondary seal for enclosing a packaging container. (See Piltz, col. 3, ll. 37-45). As Piltz describes in more detail: “there is disclosed an end closure [on the packaging container] which in

a closed condition comprises at least two different material layers arranged for being penetrated in two steps, such that the first outer layer is penetrated by a so called easy opening device, whereafter the [plastics coated aluminum foil] is removed in any suitable manner, for instance by a knife or a pair of scissors.” (Piltz, col. 1, ll. 12-18). The container device in Piltz is directed at containing liquids because Piltz discusses “water vapor high barrier[s]” and “splash free . . . pouring edge[s].” (See Piltz, col. 1, ll. 23, 29-31). Thus, the intended use of the plastics coated aluminum foil in Piltz is to function as a removable seal to contain liquid in a container. Nothing in Piltz indicates that the plastic coated aluminum foil would be suitable for use as a vibrating membrane. As a result, it would not have been obvious to one skilled in the art to combine Piltz with Gyorgy.

In view of the above, Applicant respectfully requests that the Examiner withdraw the rejection of independent claim 1. Applicant also submits that claims 2-13 are allowable at least by virtue of their dependency on claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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